

Mercu Mustapha Kamal incorporates low-e glass into its facade to address heat load issues



Functional facades in vogue

- **Oversupply** and growing millennial cohort are driving innovation in facade design among developers
- **Functional** and aesthetic facade features include vertical gardens, low-e glass surfaces and imaging solutions



by
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WHILE it's said that books should never be judged by their covers, more home seekers and investors are evaluating properties by their facades.

While the aesthetics of the facade is important, some developers are going one step further by incorporating functional features into exteriors.

These range from green innovations such as vertical gardens with benefits to resident physiology and productivity to low-emissivity (low-e) glass surfaces with structural elements to maximise lighting while reducing incoming heat.

In addition, with the growing millennial cohort driving home creation in the domestic segment, striking facade aesthetics have become a necessity for industry players seeking to differentiate their launches in a crowded market.

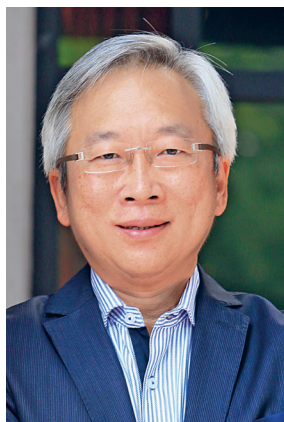
State of the art

The Emkay Group's RM385 mil Mercu Mustapha Kamal integrated development in Damansara Perdana, Petaling Jaya is an example of a project incorporating functional facade features.

"It is one of the first in Malaysia to adopt light troughs, with ceiling panels capturing diffused sunlight from the exterior and reflecting it into the building, which can greatly reduce the need for internal lighting on sunny days," says Jeffrey Ling, director of Architects 61 Sdn Bhd, the architects for the development.

"We also have passive design features such as high-performance double-glazing, soft coating low-e glass and rooftop insulation to address heat gain coming in from the facade, as cooling accounts for one of the largest overheads in office operations," he adds.

Light troughs extend natural light up



Daylight harvesting can be used to reduce building lighting costs by up to 50%, says Ling

to 7m throughout the interiors during daylight hours, reducing associated lighting and energy costs by up to 50%.

Meanwhile, its low-e glass surfaces, while costlier than conventional materials, reflect infrared light from the facade while allowing visible light to enter, regulating temperatures without compromising on interior illumination.

Spanning 0.58ha in Neo Damansara, the development encompasses two office towers with a total net floor area of more than 460,000 sq ft, along with retail units and banquet hall facilities.

Design differentials

Other industry players who have used facades to add value for their purchasers include IJM Land Bhd in its RM2.5 bil Pantai Sentral Park mixed development in Bukit Kerinchi. Its components such as Inwood Residences and the IJM Land Centre of Excellence (Ice) Gallery feature functional exteriors.

"Not all Inwood Residences units face the Bukit Kerinchi forest reserve, so we've created sky decks at intervals throughout its facade so that residents can enjoy forest and city views," says IJM Land senior general manager (central region) Datuk Hoo Kim See.

Situated on the project's 16th and 25th floors, these sky gardens function as communal areas as well as viewing

platforms, extending through the building to offer panoramas of the 80.94ha adjacent forest reserve as well as the Kuala Lumpur urban landscape.

Like Mercu Mustapha Kamal, Inwood Residences' exterior incorporates extensive glass surfaces, optimising unit views. Hoo adds the building utilises a shallow floorplate and linear unit designs to leverage on natural light coming in from the facade, while structural elements provide shading to address heat and glare issues.

The project comprises the first residential phase of the 23.47ha Pantai Sentral Park, with 211 condominium units with built-ups from 1,125 sq ft to 1,965 sq ft in a single tower. It is scheduled for completion later this year.

The developer has also invested RM30 mil into the construction of the 29,000 sq ft Ice Gallery, a property showroom and events space which features a cubiform design to maximise internal spaces and durability while presenting a striking aesthetic profile.

Crafted by the Bangkok-based Design Worldwide Partnership, it features double-glazed and laminated glass along with aluminium panels and ceramic fritting to reduce ambient temperature.

Aesthetic appeal

Striking facades have become a necessity for some developers to market their properties due to their appeal to millennial buyers, which was estimated by PricewaterhouseCoopers Malaysia to comprise up to 50% of the domestic workforce in 2012.

Developers who are leveraging on the aesthetic appeal of building exteriors include SkyWorld Development Sdn Bhd in SkyMeridien, Sentul and the Berjaya Group in its upcoming Timur Bayu launch in Shah Alam.

"Our target markets are younger purchasers and professionals, as well as upgraders from the age of 40 to 50 years old, and these demographics are drawn to interesting visual designs," says SkyWorld COO Lee Chee Seng.

"Among our recent launches, SkyMeridien's design incorporates vertical elements organically into the facade to incorporate a certain spontaneity to its profile, in line with Sentul's increasingly upmarket outlook," he adds.

SkyMeridien comprises 780 condominium units with built-ups from 581 sq ft to 1,318 sq ft across two residential towers, with a gross development value (GDV) of RM450 mil.

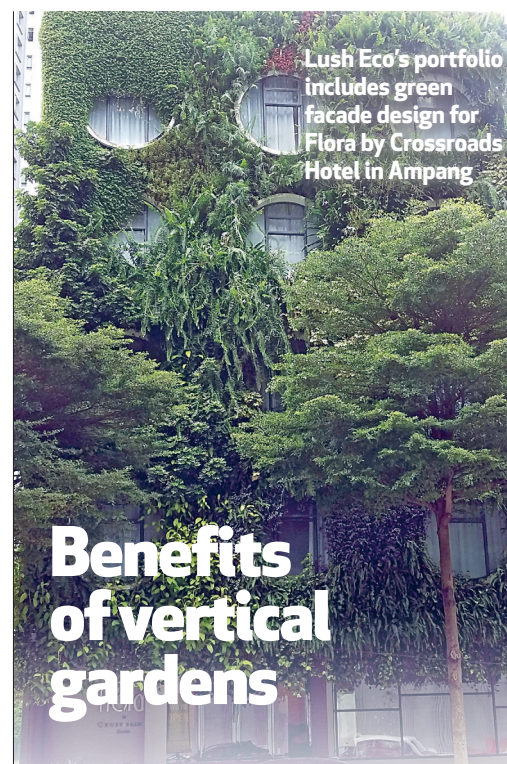
Meanwhile, the RM333 mil Timur Bayu condominium is expected to comprise 456 units in three high-rise blocks and 62 residences in eight low-rise blocks, with built-ups from 1,000 sq ft to 1,200 sq ft.

Berjaya Land Bhd senior general manager (properties marketing) Tan Tee Ming admits that the group's previous projects was a little on the plain side in terms of aesthetics. However, the developer is seeking to add "a whole new value to our launches" moving forward.

For Timur Bayu, this will include a "crown" for its facade, to make it one of the most distinctive buildings in the area. "This is what the next generation of homebuyers is looking for."

Finally, building facades can serve both functional and aesthetic purposes, as is the case with Menara TM in Kuala Lumpur.

As early as 2007, levels eight to 39 in the tower have served as a "projector screen" measuring 54m wide and 120m high, with applications such as a daily slideshow of historical figures during Malaysia's 50th Merdeka anniversary celebrations. **FocusM**



Lush Eco's portfolio includes green facade design for Flora by Crossroads Hotel in Ampang

Benefits of vertical gardens

AT the intersection of functionality and sustainability, vertical gardens and green facades are seeing more uptake in domestic launches.

"Studies have shown that vertical gardens are beneficial to buildings and people. The average worker spends more than 85% of their time indoors, and having a vertical garden can reduce stress and noise levels while improving air quality," says Lush Eco Sdn Bhd founder and managing director Ken Lim.

"Vertical gardens are also beneficial as they are visually appealing, reduce urban heat island effects and energy costs, and contribute to green building index points, thus increasing a building's value and marketing potential."

In addition, a 2016 study by the Harvard TH Chan School of Public Health, in collaboration with the State University of New York Upstate Medical University, found that employees in buildings with green features demonstrated 26% higher cognitive function test scores.

The study also found that these participants reported 30% fewer sick building symptoms and 6% higher sleep quality scores. Sick building symptoms occur when occupants experience acute health or comfort-related effects linked to time spent in a building.

Established in 2013, Lush Eco pioneered soil-less felt vertical garden systems in Malaysia. Its portfolio ranges from consultation services inclusive of site visits, light mapping and cost estimation, to structural design, plant species selection and lighting simulation.

The company's track record includes high-profile projects such as The Ritz-Carlton, Kuala Lumpur by the YTL Group, The Starling Mall, Petaling Jaya by See Hoy Chan Sdn Bhd, and Flora by Crossroads Hotel in Ampang.

Vertical gardens use small plants in modular pots or felt systems, and are also known as living or green walls. In contrast, green facades are made up of climbing plants and vines grown from the ground or planter boxes.

"Maintenance is carried out using sky lifts, building maintenance units or rope access, depending on the project. Each maintenance programme is customisable and the frequency of maintenance visit is dependent on vertical garden size and difficulty of access," says Lim.

"Green facades and vertical gardens have been used in Malaysia for many years. However, soil-less systems are relatively new. Since 2013, we have more projects using this soil-less approach due to its light weight, slim profile and higher survival rates for plants."